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A DNA vaccine composition comprising a Lac shuttle/vector that contains: 13.

Attorney's Docker

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a region which regulates a plasmid copy number, wherein said region comprises (a) an E.coli replication origin sequence;

- a eukaryotic gene expression cassette, which comprises a eukaryotic gene (b) transcriptional promoter sequence, a multiple cloning site and a transcriptional terminator sequence, wherein an antigenic gene is inserted into said multiple cloning site;
- a lactic acid bacteria plasmid sequence, which comprises a plus origin of (c) replication, and a nucleic acid sequence encoding a protein which is involved in replication of the lactic acid bacteria plasmid; and
- a marker gene that is not an antibiotic resistance gene and the promoter sequence (d) thereof.
 - 14. A method for selection of a host cell containing a vector, comprising:
 - introducing intó said host cell the Lac shuttle vector as claimed in claim 1, (i) wherein the endogenous β-galactosidase gene of said host cell is non-functional; and
- (ii) culturing said host-cell-transformed-in step (i) under conditions in which lactose is the only carbon source,

thereby selecting a host cell comprising Lac shuttle vector of claim 1. --